Draft Sediment Remedy Recontamination Definition Development for Portland Harbor

The sediment remedy in Portland Harbor is expected to dredge or cap sediment concentrations above the selected RALs. Natural recovery processes are then anticipated to reduce the remaining contaminant concentrations over time to the remediation goals. Long-term performance monitoring will be conducted by EPA to confirm that natural recovery (MNR) is occurring, cleanup goals are achieved and recontamination of the sediment remedy does not occur. It is jointly understood that both the success of the EPA sediment remedy and the sufficiency of DEQ's upland source control work will be measured, in part, by whether or not sediment recontamination occurs. Therefore, DEQ expressed a desire to work with EPA to develop a definition for recontamination of the Portland Harbor sediment remedy and a joint understanding of how recontamination will be assessed. Clarity in the ROD as to the timing, spatial scale and cleanup levels used to assess recontamination, will allow for clearer action and timeliness in addressing recontamination, should it occur.

A very broad initial definition is that recontamination means "any deposits on remediated sediment above a cleanup level," but EPA and DEQ acknowledge that such deposits may not require action beyond monitoring.

As a starting point for further discussion and in light of the phased, two-part cleanup levels anticipated by the initial remedy and on-going MNR, DEQ proposes the following refinement to get at "actionable" recontamination: *sediment recontamination means EITHER increased sediment concentrations above a RAL after achievement of RALs by the initial cleanup phase, OR increased sediment concentrations above a final remediation goal after its achievement by MNR*.

Post-RAL cleanup monitoring will evaluate the performance of the MNR remedy until it is attained or EPA determines that MNR is not occurring at an acceptable rate. Variations in sediment concentrations are highly likely to occur between the time select areas are actively remediated to the RALs and the final remediation goal being achieved by MNR. Under the DEQ-proposed definition, these interim variations will not be considered recontamination of the sediment remedy. Where monitoring determines that natural recovery is not occurring, EPA will assess adaptive management alternatives. These may include in-water actions, additional upland source control or both.

Assessing recontamination of the initial cleanup level: After EPA has certified that the construction of the initial phase of cleanup is complete and an area has achieved RALs, DEQ proposes assessing recontamination of these areas on the same sample point by sample point spatial scale by which the initial RALs exceedances were determined. Assessing recontamination of the final cleanup level: After EPA has certified that an area has achieved the final remediation goal, DEQ proposes to assess recontamination over the spatial scales consistent with the baseline ecological and human health risk assessments:

RAO1 - 0.5 river mile (direct contact for people engaged in fishing activities)

RAO2 - 1.0 river mile (dietary exposure of humans who consume fish and shellfish)

RAO5 - Point by point (sediment toxicity).

RAO6 – 1.0 river mile (dietary exposure of ecological receptors that consume fish and shellfish)

The sediment remedy would be considered recontaminated when the 95 percent upper confidence limit of the arithmetic mean of the performance monitoring data exceeds the either initial RALs or final RGs cleanup levels, as assessed on the above spatial scales.

Monitoring plans and completion certification points should be informed by this definition and spatial scale assessment elements. The timing of completion certification and assessment needs further thought and clarification.